

Serial No.: 09/461,900

Attorney Docket No: MCS-116-99

### **REMARKS**

The Office Action dated March 1, 2004, was a final rejection of claims 1-40 of the above-referenced patent application. The Applicants, however, believe that the application is in condition for allowance because each of the claims is novel and nonobvious over the cited art. The reasons for this belief are presented below. The Applicants, therefore, respectfully requests further examination and reconsideration of the subject application.

### **Drawing Objections**

Two sheets of drawings containing mark-ups are attached concurrently herewith. Namely, a first drawings sheet containing FIG. 1 has been marked-up with the phrase "(Prior Art)". Moreover, a second drawing sheet containing FIG. 2 has been marked-up to correct the exchange of reference numbers "272" and "280".

The Office Action objected to FIGS. 1 and 2 of the Applicants' drawings. In particular, the Office Action stated that FIGS. 1 and 2 should be designated as "Prior Art" because "only that which is old is illustrated" and that "[T]hese figures do not illustrate the Applicant's invention as recited in claims 1-40."

With regard to FIG. 1, as noted above, the Applicants have designated FIG. 1 by the legend "Prior Art", as requested in the Office Action.

With regard to FIG. 2, the Applicants respectfully traverse this objection because FIG. 2 does illustrate that which is new. In particular, as stated in the description of FIG. 2, the figure is "an overall block diagram of two computer networks incorporating the network simulation system of the present invention" (page 5, lines 17-18; emphasis added). A record module 244 of the present invention is shown in FIG. 2 residing on a recording server 208, and a playback module 280 of the present invention is shown in FIG. 2 residing on a playback machine 272. The record module 244 is shown in further detail in FIGS. 3-6 and the playback module 280 is shown in further detail in FIGS. 7 & 8.

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Something new and patentable, namely, the record module and the playback module of the Applicants' network simulation system, are shown incorporated into the two computer networks in FIG. 2. Moreover, both the record and playback modules are recited in the claims. Thus, the Applicants respectfully submit that FIG. 2 is not prior art. To label it as such would be erroneous as well as injurious to the Applicants' rights. Thus, the Applicants respectfully request that the objection to FIG. 2 be reconsidered and withdrawn.

### Preliminary Observations

Prior to discussing the Applicants' claimed features that are lacking in the individual pieces of art cited in the Office Action, the Applicants wish to point out some general overall differences between the cited art as a whole and the Applicants' claimed invention. Namely, cited art as a whole lacks the Applicants' claimed record module having a filter residing on a server. This patentable claimed feature is recited in each of the Applicants' claims.

Because the record module contains a filter and the filter has a unique position on the server, the filter can record and collect "more accurately the network characteristics being received by the server" and provide "more data on these network characteristics than other systems and techniques" (specification, page 3, lines 18-20). The filter actually captures network characteristics not present in server log files (specification, page 3, lines 16-18). This is due in part to the filter's location on the server. In particular, "[B]ecause of the way the ISAPI global filter was implemented into IIS the ISAPI global filter actually got called before ISS began processing the data. This feature can be useful for troubleshooting the network because by examining the log file [as recorded by the filter – this is different from the traditional server log files] it can be determined at what time a network problem occurred and what request may have caused the network problem" (specification page 24, lines 16-20). Thus, the Applicants' claimed invention includes a filter that resides on the record server that records network characteristics not captured in server log files.

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On the other hand, the cited art as a whole does not teach the Applicants' claimed record module having a filter residing on a server. As explained in detail below, most of the cited art lack a record module located on the server, and others of the cited art lack a record module having a filter. In both situations the cited art is lacking the Applicants' claimed record module having a filter residing on a server. Each of the rejections will now be discussed in greater detail.

### Section 102(e) Rejections

The Office Action rejected claims 1-40 under 35 U.S.C. § 102(e) as being anticipated by Landan (U.S. Patent No. 6,449,739), Marullo et al. (U.S. Patent No. 6,044,398), Straathof et al. (U.S. Patent No. 6,167,534), Abbott et al. (U.S. Patent No. 6,314,463), Mongan et al. (U.S. Patent No. 6,304,982), Rowe (U.S. Patent No. 6,324,492), Dantressangle (U.S. Patent No. 6,446,120), Bromberg et al. (U.S. Patent No. 5,819,066), and Sherman et al. (U.S. Patent No. 6,434,513) (hereinafter referred to collectively as "the cited art". The Office Action stated that each of these pieces of the cited art, individually, "teach the limitations as recited in claims 1-40." Thus, the Office Action maintained that each of the above nine pieces of cited art individually discloses each and every element of the Applicants' claimed invention.

In response, the Applicants respectfully traverse these rejections based on the following legal and technical analysis.

In general, the Applicants submit that the cited art lacks at least one feature of the Applicants' claimed invention.

### Independent Claim 1

Independent claim 1 of the Applicants' claimed invention includes a network simulation system for simulating network characteristics. The system includes a record module having a filter that resides on a server and records network characteristics. The system also includes a data collector file that stores the recorded network characteristics

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for playback on a playback machine.

The filter is located on the record server. In this position, the filter uses its unique position to record and collect "more accurately the network characteristics being received by the server" and provide "more data on these network characteristics than other systems and techniques" (specification, page 3, lines 18-20). The filter actually captures network characteristics not present in server log files (specification, page 3, lines 16-18). This is due in part to the filter's location on the server. In particular, "[B]ecause of the way the ISAPI global filter was implemented into IIS the ISAPI global filter actually got called before ISS began processing the data. This feature can be useful for troubleshooting the network because by examining the log file [as recorded by the filter – this is different from the traditional server log files] it can be determined at what time a network problem occurred and what request may have caused the network problem" (specification page 24, lines 16-20). Thus, the Applicants' claimed invention includes a filter that resides on the record server that records network characteristics not captured in server log files.

In contrast, Landan et al. merely disclose a recorder that resides on a controller computer. More specifically, as shown in FIG. 1 of Landan, recorder 34A is part of the controller that does not reside on the servers. Instead, the controller 34 resides on a controller computer 35, which is not the transactional server 30 (col. 5, lines 31-33).

Landan et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Landan et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Marullo et al. merely disclose a client-based website virtual browser application for web server application verification and testing (Abstract, lines 1-6; col. 1, lines 7-9, "Technical Field"; emphasis added). In particular, the client-based website virtual browser application is also referred to as "webrunner" (col. 23-26). Referring to FIG. 3 of Marullo et

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al., the webrunner 30 loops through input data (col. 8, lines 18-22). The input data of the webrunner 30 comes "either from an input data file 34 or alternatively from a user/tester employing GUI edit field input 36" (col. 8, lines 4-6). As shown in FIG. 3 of Marullo et al., both the input data file 34 and the GUI edit field input 36 resides on the client with the webrunner. Marullo et al. lack any disclosure of a record module on the web server 54.

Marullo et al., therefore, are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Marullo et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Straathof et al. merely disclose a client-based system that captures "user interface and/or application calls to generate a script to emulate a user session" (Abstract, lines 2-4). The "Capture Agent" is the sub-system that "records user activities, including keystrokes, mouse movements and SQL requests, to create emulation scripts" (col. 4, lines 56-58). As shown in FIG. 5, Straathof et al., the "Capture Agent" resides on the client side of the network. Straathof et al. lack any teaching of the "Capture Agent" residing on the server 254.

Therefore, Straathof et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Straathof et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Abbott et al. merely disclose a system and method for managing web servers based on queue length and delay. An agent 106 in Abbott et al. captures performance information periodically to "monitor load on the web service system" (col. 11, lines 46-48). However, the Applicants' claimed record module having a filter is not taught. Moreover, Abbott et al. also lack the Applicants' claimed "data collector file that stores

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th record network characteristics for playback on the playback machine." As mentioned above, the system and method of Abbott et al. are only for managing web servers, and not data is recorded for playback.

Therefore, Abbott et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics as well as the claimed feature of a data collector file that stores the recorded network characteristics for playback on a playback machine. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Abbott et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Mongan et al. merely disclose a system that uses a server computer as a "central repository for all tests performed by any number of connected client computers . . . and acts as a central repository for the results of these tests returned by the client computers" (col. 2, lines 56-61). The tests are on the server and sent to a client upon request for execution on the client (col. 4, lines 16-24). Storing tests and results of the tests on the server frees up storage space on the client (col. 4, lines 57-61).

The tests stored on the server are either prewritten tests or automatically generated tests (col. 7, lines 4-14). However, as shown in FIG. 1 of Mongan et al., the server 104 lacks the Applicants' claimed record module having a filter.

Mongan et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Mongan et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Rowe merely discloses a method and a system that uses stored "simulated client profiles each representing an associated simulated client. As an example of such

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means, FIG. 5 shows a simulated client state array 102 that has stored therein the states of each of a plurality of simulated clients" (col. 10, lines 60-65). A simulated client is "defined in part by an associated client profile that includes, for example, a set of possible states of the simulated client, state transition rules that specify possible I/O requests to a server from the simulated client in any of the possible states and a relative frequency of each of the possible I/O requests" (col. 8, lines 66-67 to col. 9, lines 1-4). This stored information about a simulated client is used to stress a server. However, the server lacks the Applicants' claimed record module having a filter.

Rowe is missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Rowe does not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Dantressangle merely discloses a method and a system that uses pre-defined test files located on the client computers to stress test a server. Specifically, as shown in FIGS. 2-4 of Dantressangle, there is disclosed a "configurable stresser 200 [that] resides at the client or simulated client UNIX machine 102" (col. 5, lines 62-63). "Initially, a user generates a test guide file 402 that contains the instructions for testing the Web server 104" (col. 5, lines 66-67). The "test guide file 402 is a text file . . . that centralizes all the information necessary for the testing/stressing process" (col. 7, lines 31-33). As shown in FIG. 9 of Dantressangle, "a user can specify the test guide file 402 using a list box 902" (col. 10, lines 57-58). Once the test guide file has been generated by user selection, each "virtual Web browser 404 executes commands specified in the test guide file 402 by transmitting these commands to the Web server 104" (col. 6, lines 25-27). Thus, Dantressangle merely disclose pre-defined test files located on the client computers to stress test a server. Nowhere does Dantressangle disclose the Applicants' claimed record module.

Dantressangle is missing the Applicants' claimed feature of record module having a

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filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Dantressangle does not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Bromberg et al. merely disclose a benchmarking application that uses benchmark transactions to submit to a database server. As shown in FIG. 6 of Bromberg et al., the benchmark transactions are generated for "submission to database server 14" (col. 11, lines 66-67). However, as can be seen from FIG. 6 and in column 12, lines 5-67, the generation of the benchmark transactions does not involve any type of record module having a filter, as claimed by the Applicants.

Bromberg et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Bromberg et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

Sherman et al. merely disclose a method of load testing a web application using test scripts residing on a client computer. A test script "defines the behavior of the simulated clients" (col. 2, lines 5-6). Each simulated client "is implemented as a separate thread, generating HTTP request according to a predefined set of instructions, called a 'test script'" (col. 4, lines 40-41). Thus, Sherman et al. merely use predefined test scripts, and lack the Applicants' claimed record module.

Sherman et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server and records network characteristics. The Applicants, therefore, respectfully traverse the rejection of independent claim 1 because Sherman et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.



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**Independent Claim 16**

Independent claim 16 includes a network simulation system for playing back recorded network characteristics. The system includes a data collector file that contains network data that has been recorded by a filter that resides on a recording server. In addition, the system includes a playback module that resides on a playback machine and plays back the data collector file. The network data is sent by the playback to a testing server to simulate network characteristics on the testing server.

As set forth above with regard to independent claim 1, none of the cited art discloses a data collector file that contains network data that has been recorded by a filter that resides on a recording server.

The Applicants, therefore, respectfully traverse this rejection of independent claim 16 over each of the pieces of cited art because the cited art does not disclose, either explicitly or implicitly, this material claimed feature of the Applicants' invention. Because of this missing feature, the §102 rejection cannot stand.

**Independent Claim 20**

Independent claim 20 includes a method of simulating computer network characteristics on a testing server. The method includes recording network data using a filter residing on a recording server, and storing the recorded network data. The method further includes playing back the recorded network data on a playback machine in communication with the testing server.

As set forth above with regard to independent claim 1, none of the cited art discloses recording network data using a filter residing on a recording server.

The Applicants, therefore, respectfully traverse this rejection of independent claim 20 over each of the pieces of cited art because the cited art does not disclose, either explicitly or implicitly, this material claimed feature of the Applicants' invention. Because of this missing feature, the §102 rejection cannot stand.

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Independent Claim 34

Independent claim 34 includes a method of recording network characteristics. The method includes providing a server having an operating system, and registering a filter residing on the server with the operating system. The method further includes using the filter to capture network data containing the network characteristics, and storing the captured network data in a data collector file for playback.

As set forth above with regard to independent claim 1, none of the cited art discloses a registering a filter residing on the server with an operating system.

The Applicants, therefore, respectfully traverse this rejection of independent claim 34 over each of the pieces of cited art because the cited art does not disclose, either explicitly or implicitly, this material claimed feature of the Applicants' invention. Because of this missing feature, the §102 rejection cannot stand.

Independent Claim 39

Independent claim 39 includes a network simulation system for recording network characteristics of a computer network. The system includes a record module located on a server on the computer network. The system also includes a custom-generated log file generated by the record module that stores the recorded network characteristics. The custom-generated log file is not a server log file of the server.

As set forth above with regard to independent claim 1, none of the cited art discloses a record module located on a server on the computer network.

The Applicants, therefore, respectfully traverse this rejection of independent claim 39 over each of the pieces of cited art because the cited art does not disclose, either explicitly or implicitly, this material claimed feature of the Applicants' invention. Because of this missing feature, the §102 rejection cannot stand.

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**Independent Claim 40**

Independent claim 40 includes a method of recording network characteristics on a computer network having a server. The method includes using a record module disposed on the server to produce a custom-generated log file containing network characteristics, where the custom-generated log file is separate from a standard server log file of the server.

As set forth above with regard to independent claim 1, none of the cited art discloses using a record module disposed on the server to produce a custom-generated log file containing network characteristics,

The Applicants, therefore, respectfully traverse this rejection of independent claim 40 over each of the pieces of cited art because the cited art does not disclose, either explicitly or implicitly, this material claimed feature of the Applicants' invention. Because of this missing feature, the §102 rejection cannot stand.

Because the Applicants' claimed invention includes features neither taught, disclosed nor suggested by the cited art, the Applicants respectfully submit that the rejection of independent claims 1, 16, 20, 34, 39 and 40 under 35 U.S.C. § 102(e) as being anticipated by each piece of the cited art individually has been overcome based on the arguments and analysis set forth above. Moreover, rejected claims 2-15 depend from independent claim 1, rejected claims 17-19 depend from independent claim 16, rejected claims 21-33 depend from independent claim 20, and rejected claims 35-38 depend from independent claim 34 and therefore also are novel over the cited art (MPEP § 2143.03). The Applicants, therefore, respectfully request reexamination, reconsideration and withdrawal of the rejection of claims 1-40 under 35 U.S.C. § 102(e) as being anticipated by each piece of the cited art individually based on the arguments and analysis presented above and below.

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The Office Action rejected claims 1-40 under 35 U.S.C. § 102(b) as being anticipated by Chen et al. (U.S. Patent No. 5,432,932). The Office Action stated that Chen et al. "explicitly teaches the limitations in claims 1-40." Thus, the Office Action maintained that Chen et al. disclose each and every element of the Applicants' claimed invention.

In response, the Applicants respectfully traverse these rejections based on the legal and technical analysis above and below. In general, the Applicants submit that Chen et al. lack at least one feature of the Applicants' claimed invention.

As stated above, independent claims 1, 16, 20, 34, 39 and 40 of the Applicants' claimed invention each include or use a record module having a filter that resides on a server.

In contrast, Chen et al. merely disclose a system and method for performance monitoring of a network, wherein the performance monitoring system and method reside on a client computer. More specifically, Chen et al. use a client/server model, where the model "is implemented with a server program, known as a "Data Supplier", that runs as a daemon on the server system and one or more client programs, call "Data Consumers", which are providing the monitoring facilities" (col. 4, lines 3-10). The fact that the performance monitoring system and method reside on the client is made even more clear in column 4, lines 24-27, where the "graphical monitoring program as described in more detail below" is listed as one of "The Data Consumer Programs" (see also FIGS. 1 and 8 of Chen et al.). Thus, Chen et al. merely disclose a system and method that reside on a client computer, and lack the Applicants' claimed record module having a filter that resides on a server.

Chen et al. are missing the Applicants' claimed feature of record module having a filter that resides on a server. The Applicants, therefore, respectfully traverse the rejection of independent claims 1, 16, 20, 34, 39 and 40 because Chen et al. do not disclose, either explicitly or implicitly, this material claimed feature. Because of this missing feature, the §102 rejection cannot stand.

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Because the Applicants' claimed invention includes features neither taught, disclosed nor suggested by Chen et al., the Applicants respectfully submit that the rejection of independent claims 1, 16, 20, 34, 39 and 40 under 35 U.S.C. § 102(b) as being anticipated by Chen et al. has been overcome based on the arguments and analysis set forth above. Moreover, rejected claims 2-15 depend from independent claim 1, rejected claims 17-19 depend from independent claim 16, rejected claims 21-33 depend from independent claim 20, and rejected claims 35-38 depend from independent claim 34 and therefore also are novel over the cited art (MPEP § 2143.03). The Applicants, therefore, respectfully request reexamination, reconsideration and withdrawal of the rejection of claims 1-40 under 35 U.S.C. § 102(b) as being anticipated by Chen et al. based on the arguments and analysis presented above.

#### Conclusion

Because the Applicants' claimed invention includes features neither taught, disclosed nor suggested by the art cited in the Office Action, the Applicants respectfully submit that the rejections of claims 1-40 as being anticipated has been overcome.

The Applicants, therefore, submit that claims 1-40 of the subject application are in immediate condition for allowance. The Examiner, therefore, is respectfully requested to withdraw the outstanding rejections of the claims and to pass all of the claims of this application to issue.

If, after considering the arguments for patentability presented herein, the Examiner still maintains that cited art shows each and every element of the Applicants' claimed invention, the Applicants respectfully ask that the Examiner point out to the Applicants specific sections in each one of the cited art that support the Examiner's position. This will enable the Applicants to better and more specifically respond to the rejections.

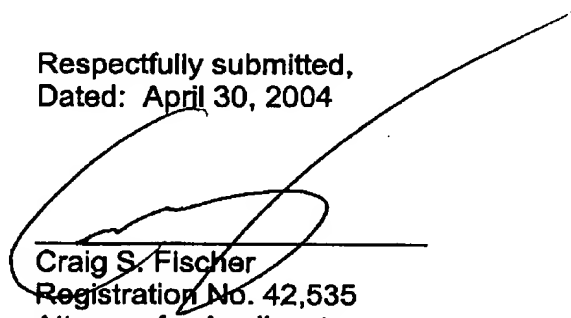
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The Examiner is reminded that "[W]hen a claim is refused for any reason relating to the merits thereof . . . the ground of rejection [should be] fully and clearly stated" (MPEP § 707.07(d)). Moreover, the "examiner ordinarily should reject each claim on all valid grounds available, avoiding, however, undue multiplication of references (MPEP § 707.07(g)). "In selecting the references to be cited, the examiner should carefully compare the references with one another and with the applicant's disclosure to avoid the citation of an unnecessary number. The examiner is not called upon to cite *all* references that may be available, but only the 'best.' (37 CFR 1.104(c).) Multiplying references, any one of which is as good as, but no better than, the others, adds to the burden and cost of prosecution and should therefore be avoided" (MPEP § 904.03; emphasis added).

In an effort to expedite and further the prosecution of the subject application, the Applicants kindly invite the Examiner to telephone the Applicants' attorney at (805) 278-8855 if the Examiner has any comments, questions or concerns, wishes to discuss any aspect of the prosecution of this application, or desires any degree of clarification of this response.

Respectfully submitted,  
Dated: April 30, 2004



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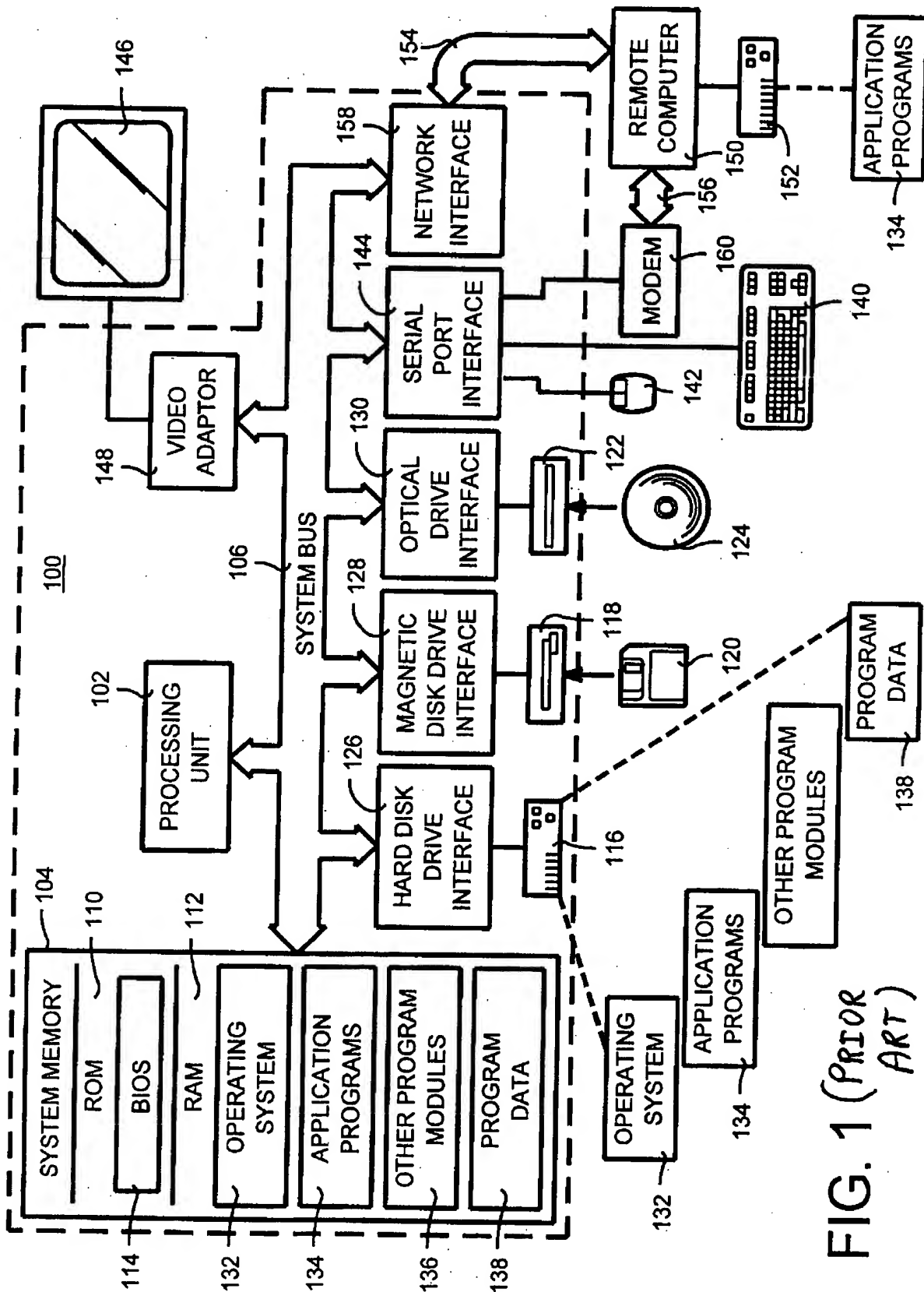


FIG. 1 (PRIOR ART)

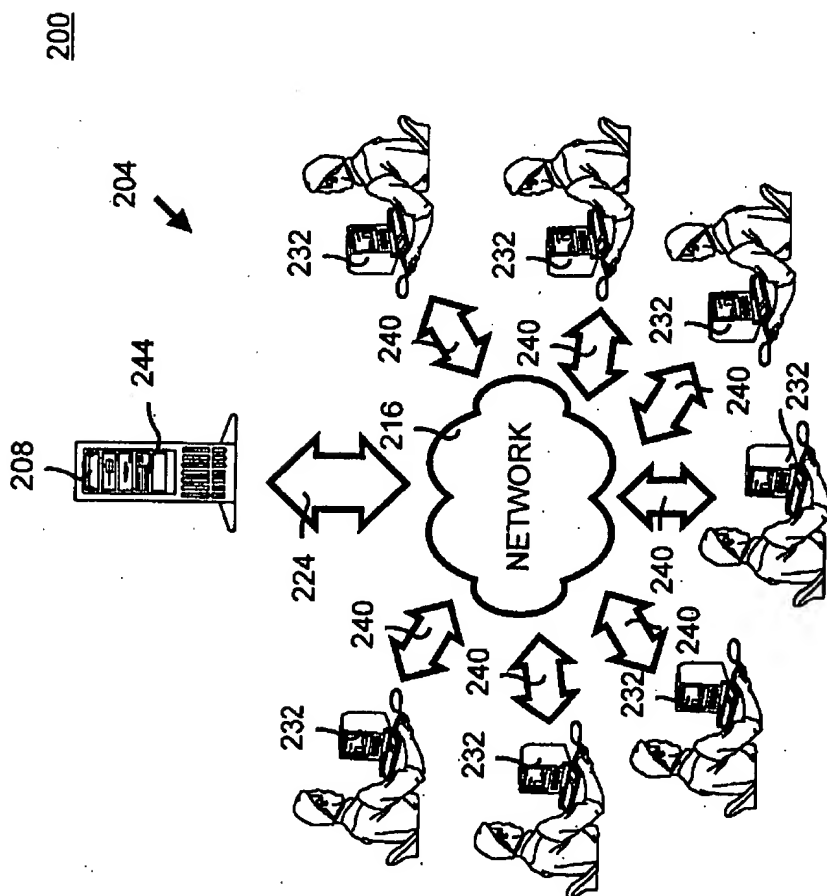
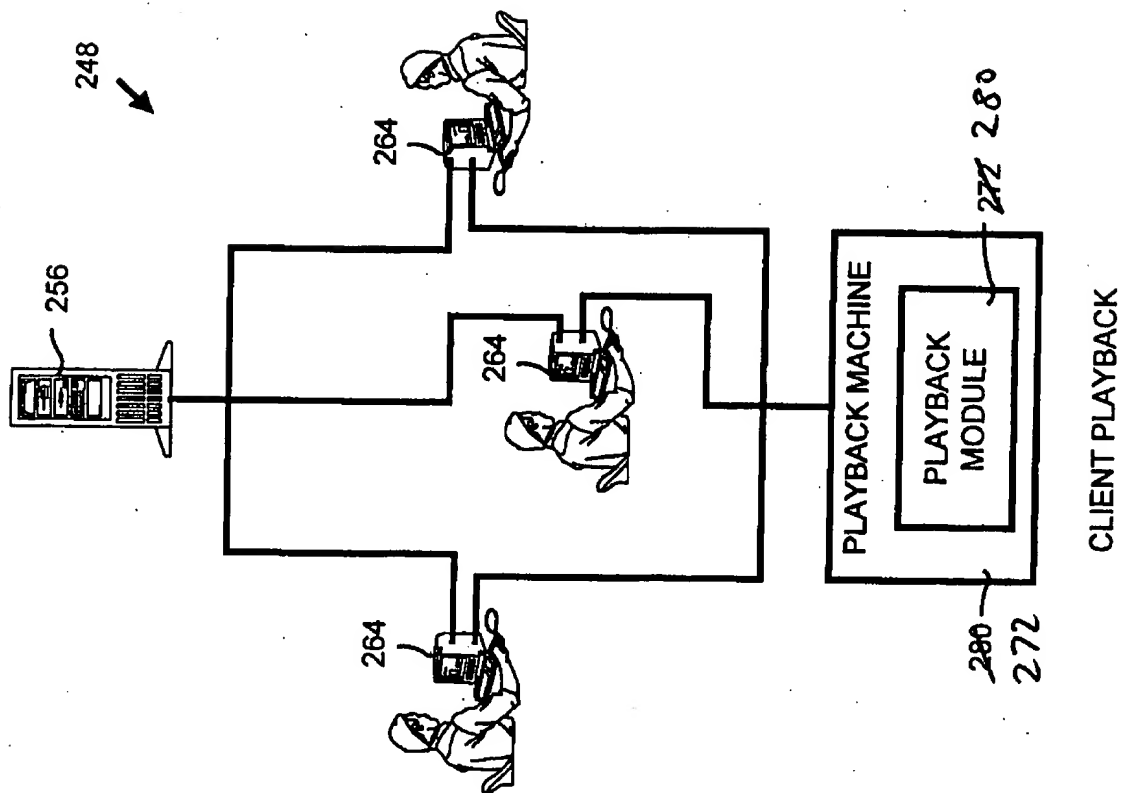


FIG. 2